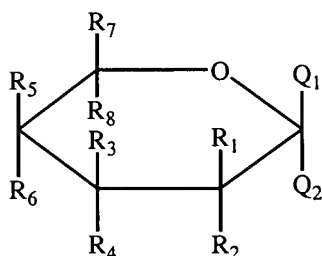


### **ABSTRACT OF THE DISCLOSURE**

The present invention relates to compositions and methods for inhibiting the interaction of a ligand and receptor. In particular, compositions and methods are provided for inhibition of interaction between a virus, especially HIV, and a receptor. Inhibition of such ligand/receptor interaction is advantageous in inhibiting infection of a cell with a virus. Further, an inhibitor of ligand/receptor interaction serves as a standard in assays of inhibition in vitro or in vivo. In a particular embodiment, a composition according to the invention includes a compound having the formula:  $[(X) - (Y)]_p - Z$  where X is



- 10 and where Q1 and Q2 are each independently H, a bond to Y, or a bond to Z, where at least one of Q1 or Q2 is a bond to Y or a bond to Z; where R1, R4, R6 and R8 are each H; R2, R3, and R5 are each independently OH, OSO<sub>3</sub>D, or OPO<sub>3</sub>D, and R7 is CH<sub>2</sub>OH, CH<sub>2</sub>OSO<sub>3</sub>D or CH<sub>2</sub>OPO<sub>3</sub>D; where D is H or a cation selected from the group consisting of: alkali metal cations, alkaline earth metal cations, ammonium cations, quaternary ammonium cations and
- 15 amine cations; and where at least one of R2, R3, R5 and R7 is a sulfur or phosphate containing group; where Y is an optional linker, Z is a multivalent support, and p is an integer in the range of 1-2000 inclusive.